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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,751	09/25/2003	Miguel Dajer	IDS 125676 67,108-018	2766
26096	7590	01/25/2005	EXAMINER	
CARLSON, GASKEY & OLDS, P.C. 400 WEST MAPLE ROAD SUITE 350 BIRMINGHAM, MI 48009			STEIN, JAMES D	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/670,751

Applicant(s)

DAJER ET AL.

Examiner

James D. Stein

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-18 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 3-7 are rejected under 35 U.S.C. 102(a) and (e) as being anticipated by [USPAT 6,661,940] to Kim.

With regard to claim 1, Kim discloses a related optical communication device with optical plane bus system. Figs. 2a and 2b show at least one radio 104a remote from backplane 30, and a communication link 124a, which carries signals between said remote radio 104a and said backplane 30.

With regard to claim 3, in addition to the rejection of claim 1 discussed above, Fig. 1 shows at least one backplane card 80 attached to said backplane 30. Figs. 1 and 2a show said communication link 124a connected to said backplane card 80 via card 84a.

With regard to claim 4, in addition to the rejection of claim 3 discussed above, Fig. 1 of Kim shows backplane card 80 to be coupled with radio card slot 82a of radio card 84a. Coupling is enabled by hologram 110a (col. 9 line 6).

With regard to claim 5, in addition to the rejection of claim 1 discussed above, referencing Fig. 2a, Kim teaches a radio card 84a to be connected to said radio 104a. Furthermore, communication link 124a is shown to be connected radio card 84a.

With regard to claim 6, in addition to the rejection of claim 5 discussed above, Fig. 1 of Kim shows said backplane card 80 to be connected to backplane 30. Thus, communication link 124a is inherently connected to both backplane card 80 and radio card 84a via said radio card 84a, as shown by Fig. 2a.

With regard to claim 7, in addition to the rejection of claim 6 discussed above, Fig. 1 shows a plurality of radio cards 84a-e connected to said backplane card 80.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by [USPAT 6,366,723] to Medved et al.

With regard to claim 1, Medved discloses a related optical communication device with optical plane bus system. Fig. 2 shows at least one radio 38L remote from a backplane 58L, and a communication link 64L, which carries signals between said remote radio 38L and said backplane 58L.

With regard to claim 2, in addition to the rejection of claim 1 discussed above, Medved teaches said communication link 64L connecting said radio 38L to said backplane 58L to be optical fiber (col. 8 line 10), thus comprising a "fiber link" as claimed by applicant.

With regard to claim 3, in addition to the rejection of claim 1 discussed above, Fig. 2 shows at least one backplane card 68 attached to said backplane 58L, and said communication link 64L is shown to be connected to said backplane card 68. Furthermore, Medved teaches said backplane card 68 to comprise several embodiments including "graded index lenses and collimators (col. 7 line 44)," which anticipates applicants teaching in the specification (page 2 line 14).

With regard to claim 4, in addition to the rejection of claim 3, above Fig. 2 of Medved shows said backplane card 68 to be coupled with a radio card slot 60L in said backplane 58L.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. In addition to the rejection of claim 6 discussed above, Kim discloses at least one radio card comprising a plurality of radio cards 84a-e attached to a backplane card 80, wherein said backplane card 80 is connected to said plurality of radio cards 84a-e and connected to backplane 30. Kim does not disclose said at least one backplane card 80 to comprise a plurality of backplane cards configured in the same manner, as claimed by applicant. However, it would have been obvious to one of ordinary skill in the art to

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modify the device as taught by Kim to include a plurality of backplane cards configured in this manner in order to provide for additional radio cards to be added to the system in a manageable way, and thus increasing the capacity of the system. It has been held that duplicating parts for a multiple effect such as this requires only routine skill in the art. In re Harza, 274 F.2d 669, 671, 124 USPQ.

Claims 10-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim and further in view of Medved et al.

With regard to claim 10, Fig. 1 of Kim shows a backplane fiber card 80 having backplane connector 42, a radio fiber card 84a having a radio connector 82a, and at least one communication link 124a (Fig. 2a) connecting the backplane fiber card 80 and radio fiber card 84a. Although Kim does not teach said communication link 124a to be a "fiber link," specifically, Medved teaches a communication link 64L connecting said radio 38L to said backplane 58L to be optical fiber (col. 8 line 10), thus comprising a "fiber link" as claimed by applicant. It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the device as taught by Kim to include a "fiber link" as taught by Medved to allow versatility in the placement of said at least one radio fiber card 84a. Such a modification would allow more remote placement of the radio card 84 than allowed by open communication link 124a taught by Kim. It is noted to applicant that in view of this teaching, all optical communication links from this point forward may be considered "fiber links" by the examiner.

With regard to claim 11, in addition to the rejection of claim 10 discussed above, Kim-Medved do not disclose said radio fiber card 84a and said backplane fiber card 80

to each have a standard configuration for connection to a backplane and a radio, respectively. However, at the time of the invention, one of ordinary skill in the art would have found it obvious to include such standard connection configurations so as to allow the components of the device to be interchanged.

With regard to claim 12, in addition to the rejection of claim 10 discussed above, Figs. 2a and 2b of Kim in combination show the radio card 84a, which is connected to backplane fiber card 80 (Fig. 1), to comprise both an optical transmitter 104a and an optical receiver 102a, thus comprising an optical transceiver 100a as claimed by applicant. Furthermore, said optical transceiver 100a is shown by fig. 2a to be connected to fiber link 124a. Therefore, because said fiber links are shown by Fig. 1 to communicate through said backplane fiber card 80, said backplane fiber card 80 and said radio fiber card 84 comprise "at least one optical transceiver 100a connected to said radio fiber card 84," as claimed by applicant. It is noted to applicant that fiber link 124a was previously discussed above with regard to claim 10.

With regard to claim 13, in addition to the rejection of claim 10, Figs. 2a and 2b of Kim shows a plurality of fiber links 124a, b, 120 etc. Furthermore, each of said plurality of fiber links is shown by the figures to be connected to one radio fiber card (84a-e). Therefore, because said fiber links are shown by Fig. 1 to communicate through said backplane fiber card 80, said backplane fiber card 80 and said plurality of fiber links 124a, b, and 120 comprise "a plurality of fiber links each fiber link connected to one radio fiber card," as claimed by applicant. It is noted to applicant that fiber links, such as 124a were previously discussed above with regard to claim 10.

With regard to claims 14 and 15, the method of transmitting a signal between backplane and remote radio is inherent to the disclosure above concerning claim 12. It is noted to applicant that said fiber link 124a/120 is shown by figs. 2a and 2b to be connected to remote radio 100a. It is also worth noting that transceivers are well known in the art to be radios (such as hand-held two-way radios).

With regard to claim 16, in addition to the rejection of claim 14 discussed above, Referencing figs. 2a and 2b, Kim teaches radio card 84c comprising radio transceiver 102c and 104c, to be a "distributor" radio located at the midpoint of the backplane assembly 20 (col. 7 line 66 – col. 8 line 8), and thus a non-remote radio. This teaching inherently describes "transmitting a second signal 124e from the backplane 30 to a non-remote radio 102c connected to the backplane 30, wherein the remote radio 84a and the non-remote radio 84c are in communication with the backplane 30 (fig. 2a)," as claimed by applicant. Furthermore, all signals are shown by figs. 2a and 2b to be transmitted from backplane 30, as claimed by applicant.

With regard to claim 17, in addition to the rejection of claim 14 discussed above, all limitations of this claim are inherent to disclosure previously discussed above except for transmitting a second signal " to a second communication link connected to the backplane card." Fig. 2b of Kim shows a second signal 120b transmitted from backplane 30 to a second remote radio 102d through a second communication link connected to the backplane card 80 (Fig 1).

With regard to claim 18, in addition to the rejection of claim 14 discussed above, the "intercepting and transmitting steps are conducted to a plurality of remote radios"



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are taught by Kim in col. 7 line 66 – col. 8 line 8. The communication steps between said plurality of radios are clearly illustrated in figs. 2a and 2b.

### ***Allowable Subject Matter***

Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the cited prior art discloses or suggests “at least one non-remote radio is plugged into a first radio card slot in the backplane and said at least one backplane fiber card plugged into a second radio card slot in the backplane and connected to said at least one radio card via said at least one communication link.”

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: [USPAT 6,771,845] to Levy et al and [USPUB 20030012485] to Neely et al, which disclose related optical backplane communication systems.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

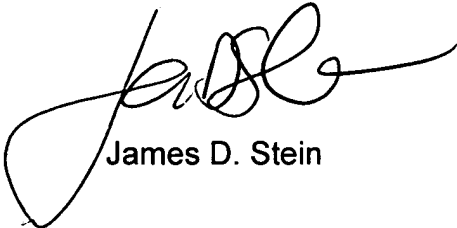
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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James D. Stein whose telephone number is (571) 272-2132. The examiner can normally be reached on M-F (8:00am-4:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



James D. Stein



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